

CLAIM AMENDMENTS

1. (previously presented) A computer readable medium encoded with information apparatus data output software for managing output of content by a wireless information apparatus, comprising:
  - software for accessing at least part of said content;
  - software for opening a wireless communication channel;
  - software for searching wirelessly for wireless output devices available for wireless communication;
  - software for receiving over the wireless communication channel at least one attribute corresponding to each wireless output device found in the search;
  - software for selecting a wireless output device found in the search based at least in part on the received attributes;
  - software for conforming at least part of the content into one or more output images;
  - software for generating at the information apparatus an output data that conforms to at least one of the attributes of the selected output device and includes said one or more output images; and
  - software for delivering the output data over the wireless connection for rendering by the selected output device,  
whereby the wireless information apparatus is able to output one or more images representative of said content to an output device without need to install an output device driver specific to that output device.

2-21 (Canceled)

22. (previously presented) The medium according to claim 1 in which the information apparatus data output software is operable for managing output of content by one of a mobile phone, a digital camera, a laptop, and a PDA.

23. (previously presented) The medium according to claim 1 in which the information apparatus data output software is operable for managing output of content to one of a printer, a projection, a copier, a speaker, an audio output device, a display screen, and a TV.

24. (previously presented) The medium of claim 1 in which software for establishing a wireless connection with the selected wireless output device comprises software for authenticating wireless access to the output device by sending over the wireless communication channel one or more of a name, a password or security code, an ID number or address, a signatures, a security keys (physical or digital), biometrics, a fingerprints, and a voice.

25. (previously presented) The medium of claim 1 in which the software for receiving at least one attribute over the wireless communication channel comprises software for receiving one or more of a device name, a device type, an address or ID number, an indication of a supported device profile, a device profile, and a security code.

26. (previously presented) A method of operating an information apparatus with access to content for managing output of said content, said method comprising:

opening a wireless communication channel;

searching wirelessly for wireless output devices available for wireless communication;

receiving over the wireless communication channel at least one device attribute associated with at least one available wireless output device;

selecting a wireless output device found in the search based at least in part on the received device attribute;

conforming at least part of the content into one or more output images with said received device attribute;

generating an output data that includes said one or more output images; and

delivering the output data over the wireless connection for rendering by the selected output device,

whereby the wireless information apparatus is able to output one or more images representative of said content to an output device without need to install an output device driver specific to that output device.

27. (previously presented) The method according to claim 26, wherein the device attribute includes a rasterization parameter, and

the step of conforming at least part of the content into one or more images employs at least in part the rasterization parameter.

28. (previously presented) The method according to claim 26, further comprising, after the selecting step:

obtaining a security key at the information apparatus;

sending the security key to the selected output device over the wireless communication channel for authentication;

receiving over the wireless communication channel at least an indication related to a successful security key authentication;

using the authenticated key to establishing a secured wireless connection with the selected wireless output device;

29. (previously presented) A method of transferring digital data from an information apparatus with access to content to a wireless output device by short range wireless communication, wherein the information apparatus includes at least one wireless communication unit, the method comprising:

opening a wireless communication channel;

searching wirelessly for a wireless device that is available for wireless connection;

receiving over the wireless communication channel an attribute corresponding to each wireless device found in the search, the attribute being at least one of a name, a device type, a device address number, a security code, and an output device profile;

selecting a wireless output device found in the search based at least in part on the received attributes, the output device being at least one of a printing device, an audio device and a display device;

establishing a wireless connection with the selected wireless output device;

conforming, at the information apparatus, at least part of the content into an output data, using at least in part the said received attribute, the output data being at least partly device independent of the selected wireless output device and comprising at least one digital file encoded with a digital format; and

transferring the output data over the wireless connection to the selected wireless output device for rendering.

30. (previously presented) The method according to claim 29, further comprising, after the selecting step:

- obtaining a security key at the information apparatus;
- sending the security key to the selected output device over the wireless communication channel for authentication;
- receiving over the wireless communication channel at least an indication related to a successful security key authentication; and
- utilizing the authenticated security key to establish secure wireless access to the selected wireless output device.

31. (previously presented) A method of secure wireless transfer of digital data from an information apparatus with access to content to a wireless output device by short range wireless communication, wherein the information apparatus includes at least one wireless communication unit, the method comprising:

- opening a wireless communication channel;
- searching over the wireless communication channel for a wireless device that is available for wireless connection;
- receiving over the wireless communication channel at least an attribute corresponding to each wireless device found in the search, the attribute including one or more of a name, a device type, a device address, and an output device profile;
- selecting a wireless output device found in the search based at least in part on the received attributes;
- obtaining a security key relating to the selected wireless output device at the information apparatus;
- sending the security key to the selected output device over the wireless communication channel for authentication;
- receiving over the wireless communication channel at least an indication related to a successful security key authentication;
- establishing a secured wireless communication channel with the selected wireless output device;
- conforming, at the information apparatus, at least part of the content into an output data, the conforming related at least in part to the received attribute; and
- transferring the output data over the secure wireless communication channel to the selected wireless output device.

32. (previously presented) The method of claim 31 in which said security key compromises at least one of a user name, password, ID number, signatures, security keys (physical or digital), biometrics, fingerprints, and a voice.

33. (previously presented) The method of claim 31 in which the step of obtaining the said security key comprises inputting by the user or retrieving a key that was previously stored in the information apparatus.

34. (previously presented) The method of claim 33 further comprising:

receiving at the information apparatus and over the wireless communication channel established with the wireless output device a security key for authentication;

comparing the received security key with an access control list stored in the information apparatus; and

if the step of comparing the received security key is successful, granting the wireless output device a secured wireless communication channel access to the information apparatus, thereby enabling a two way authentication and verification for a secured bi-directional wireless communication.

35 (currently amended) The method of claim 31 in which the step of obtaining the said security key comprises inputting by the user and the method further comprises 33 further comprising:

receiving at the information apparatus and over the wireless communication channel established with the wireless output device a security key for authentication;

comparing the received security key with the security key in the information apparatus input by the user or previously stored in the information apparatus; and

if the step of comparing the received security key with the security key in the information apparatus is successful, granting the wireless output device a secured wireless communication channel access to the information apparatus, thereby enabling a two way authentication and verification for a secured bi-directional wireless communication.

36. (previously presented) A method of wireless audio data output from an information apparatus with access to audio content to a wireless audio output device by short range wireless communication, wherein the information apparatus includes at least one wireless communication unit, the method comprising:

opening a wireless communication channel;

searching wirelessly for a wireless audio device that is available for wireless connection;

receiving over the wireless communication channel an attribute corresponding to each wireless audio device found in the search, the attribute includes at least one of a name, a device type, a device address, and an output device profile;

selecting a wireless audio output device from among a list of wireless audio devices found in the search and based at least in part on the received attributes;

obtaining a security key at the information apparatus, the security key enabling wireless access to the selected wireless audio device and relating to the selected wireless audio device;

sending the security code over the wireless communication channel and requesting the selected wireless audio device to open a wireless connection channel;

receiving over the wireless communication channel a response related to the authentication; and

if the received response is positive, establishing a wireless connection channel between the information apparatus and the selected wireless audio device, conforming, at the information apparatus, at least part of the audio content into an output data encoded with at least one format, the conforming relating at least in part to the said attribute received over the wireless communication channel, and transferring the output data from the information apparatus to the selected wireless audio output device over said wireless connection channel for rendering.

37. (previously presented) The method of claim 36 in which the step of obtaining a security key at the information apparatus comprises obtaining one or more of a predefined default number and an input by the user.

38. (previously presented) The method of claim 36 in which output data include one or more of a voice, a music, and an ambient sound.